



SUMMERS & SCOTT, LTD.,

GLOUCESTER.

General Engineers and Manufacturers of Special Heavy Machinery.

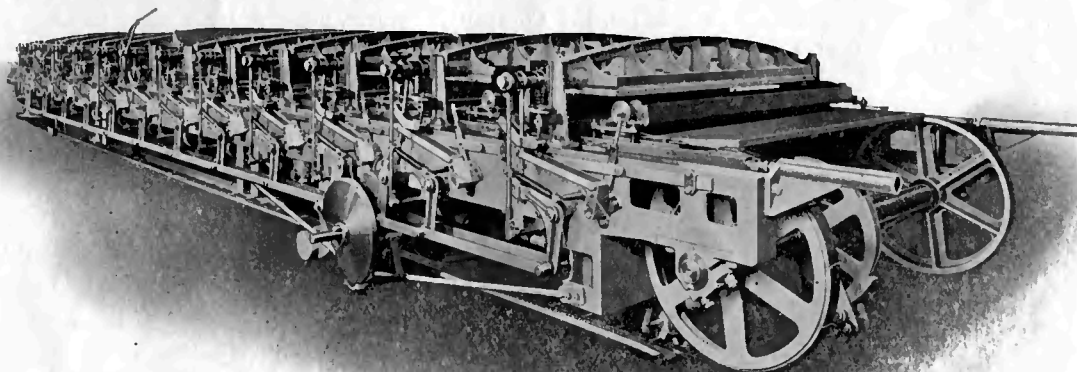
ONE of the very best types of Gloucestershire's industries is that afforded by the "High Orchard Engineering Works," owned and operated by Messrs. Summers and Scott, Limited. But few similar concerns in

Coincident with the steady growth of the business the premises, which were originally in Baker-street, have been frequently altered and enlarged. In 1889 it was decided that the old quarters had become wholly inadequate, and the present buildings in Bristol-road were erected, and the entire plant, with the exception of the pattern shop and foundry, which still remain in Baker-street, was removed to the new buildings.

63 feet in width, with a central height of 40 feet. It is lighted entirely from the roof. Running through it is the railway siding, and over head is a steam-driven fifteen ton travelling crane 36 feet in width and clearing 20 feet from the floor, travelling the full length of the building.

The mechanical equipment of this main machine fitting and erecting room is the best that invention and technical skill could produce. A great deal of the machinery, much of which

is very heavy, was designed and constructed by the Company for special purposes. The equipment is almost constantly being improved, as the moment a machine has outlived its usefulness it is discarded for a more effective type. At all times the immense shop is filled with finished and partly finished work, and there is usually at one end of the shop a set of huge pumps, stamping machines, or other machinery in course of erection for testing purposes. Altogether the shop affords one of the most interesting glimpses of industry to be seen in this section.



PATENT FLAT-BLOCK LINOLEUM PRINTING MACHINE.

Designed and Constructed by Summers and Scott, Ltd.

Great Britain are more widely known both at home and abroad, and none have a finer mechanical equipment, or turn out a higher class of work. The history of the Company is particularly interesting, illustrating in a striking manner the revolution that has taken place in engineering during the past half century; and their present high standing is in large part due to the readiness with which they have adapted themselves to the changes brought about by modern science and invention.

The business was originally established by Messrs. Savory and Sons, in 1850. It was carried on by them until 1881, when it came into possession of Messrs. T. & W. Summers, under whose name it remained until ten years later, when Mr. C. H. Scott became a member of the Company, the firm's name at the same time being changed to Summers and Scott. In 1902 the present limited liability Company was formed, of which Mr. T. W. Hibbard is chairman, and Mr. C. H. Scott managing director.

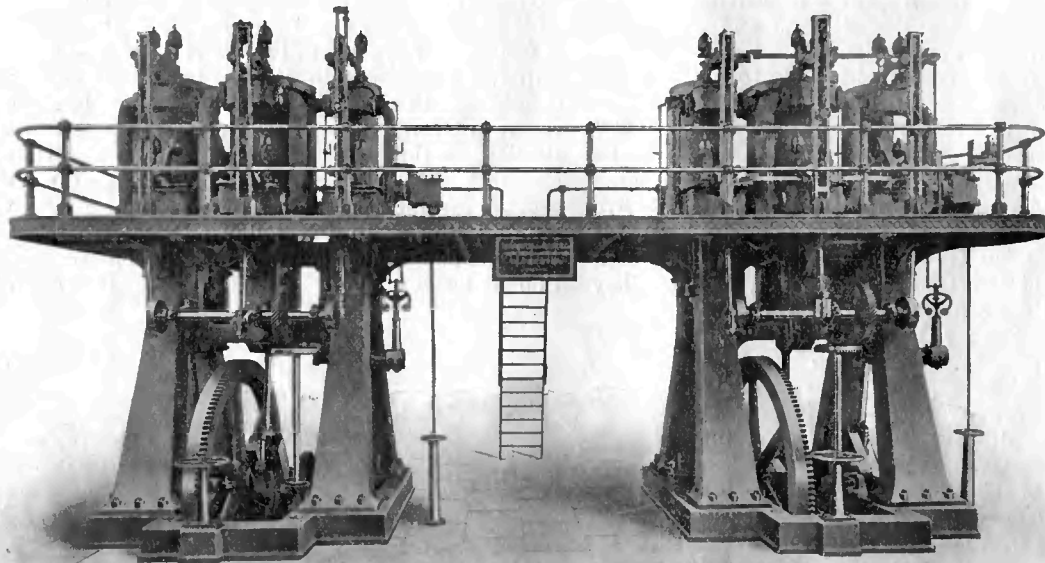
Throughout the several changes in the personnel of the Company the business has shown an almost unbroken increase as regards both the quantity of work turned out, and the extent of the Company's connection. For some years after its inception the business was confined almost wholly to repair work, the manufacture of flour milling machinery, water wheels, and other specialities being added from time to time. It is interesting to know that in the course of their history of fifty years the Company have introduced a number of new machines which have since been largely developed, sometimes by other firms, but oftener by themselves, their innovations giving a decided impetus to engineering. One of the earliest of their manufactures was a steam plough, which has since become quite an industry in itself, although the city in which the invention had its birth is no longer interested in its manufacture. Machinery required in wooden-match factories, linoleum factories, oil and cake mills, stamping mills, light draught tugs and launches, and for other special purposes, have also been successfully introduced from time to time, the Company now owning many valuable patents.

The construction, arrangement and equipment of Messrs. Summers and Scott's, Limited, works, which they themselves planned, deserve more than a passing reference. The premises are in the form of a square, having an area of about 7,000 square yards. A large proportion of this space is under roof, and it is anticipated that much of the reserve ground will soon be built upon. A railway siding runs directly through the main machine fitting and erecting shop and the yard, facilitating the shipment of the heavy machinery. The business offices, drawing office, stores, small experiment and model room, boiler house, smithy, small fitting and erecting shop, and the main machine fitting and erecting shop are so placed in regard to each other as to minimise labour and promote despatch in passing the work from stage to stage. All of the buildings, which are of one storey, are very substantially constructed, and practically fireproof.

Among the larger rooms are the boiler house, 70 x 17 feet in dimensions; the smithy, 75 x 40 feet; the small fitting and erecting shop, 60 x 40 feet; and the main machine, fitting and erecting shop. The latter, which is undoubtedly one of the finest single workshops in Gloucestershire, is 153 feet in length by

While Messrs. Summers and Scott, Limited, execute every kind of engineering they have for some years specialized along several lines in which their success has been most pronounced. Among their specialities may be mentioned machinery for the manufacture of linoleum, pumping machinery, mining and stamping machinery, and light draught steam tugs and launches. In all of these lines their reputation is world-wide, the Company having the distinction of having executed very large orders for a number of foreign countries.

Of their specialities their machinery for the manufacture of linoleum is probably the most important. The Company's first venture in this particular line was in the early '70's, since which date they have taken out many patents, and are still introducing radical improvements. It may be stated with perfect accuracy, indeed, that the Company have equipped more linoleum plants than has any other firm in the world, and that their machinery is everywhere recognised as being unsurpassed. Some years ago they erected in Germany linoleum-making machines valued at many thousands of pounds—a very refreshing contrast to the "Made in Germany" productions that bring dismay to so many unprogressive British manufacturers. At the present date the effect of the German tariff



THREE-CRANK INVERTED TRIPLE EXPANSION SURFACE CONDENSING ENGINE.

Designed and Constructed by Summers and Scott, Ltd.



Iron and Engineering.



and the avowed intention of the Germans to foster their own trade as much as possible has been to practically close this market.

It should be added that the Company not only manufacture linoleum-making machinery to order, but that they design and instal complete plants. For this work their long experience has given them special qualifications, their own inventions and improvements being of great value. Accompanying this notice is an engraving of the Company's patent flat block linoleum printing machine. This machine has been supplied to the leading linoleum manufacturers in Europe and America. The workmanship is of the highest class, and the machine is fitted with the very latest improvements, far surpassing any other printer on the market. At the present time the Company are introducing very important improvements in a machine for making what is known as "in-laid" linoleum, in which the patterns and colours are the same on both sides. This machine, which is one of the most complicated known to any industry, is destined to effect a wonderful saving in labour and cost in the manufacture of in-laid linoleum, as well as adding to the appearance of the product.

Another speciality, the manufacture of high-class mining and stamping machinery of every description, has given the High Orchard Iron Works a wide reputation. Their plants have

designed valves and gear for use with super-heated steam.

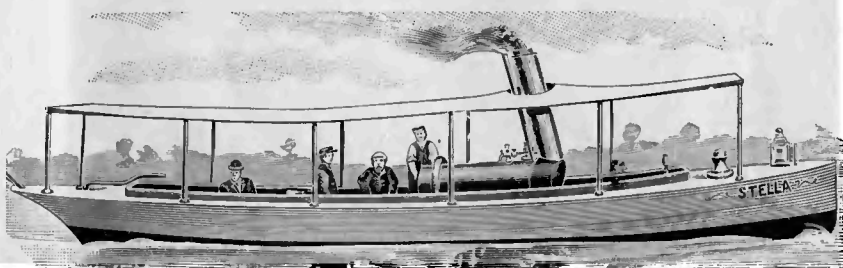
Another type of their engines is also shown in the last engraving on this page. This is a rolling mill engine of 500 H.P., and was designed and constructed for a firm in South Wales.

In the construction of light draught steam tugs and launches, Messrs. Summers and Scott, Limited, have also won distinction, although it is scarcely ever suspected, even among the well informed, that Gloucester has ever been known as a boat-building centre. The Company constructed for navigation on the Thames several steam tugs, which have been pronounced by experts to be among the very best that ply on that river. They have also sent boats of

Bellows, one of the leading exponents of the "art preservative of arts" in the kingdom.

These catalogues, which will be posted to any address upon application, will be found both interesting and instructive to those who are acquainted with the technical features of engineering.

Mr. C. H. Scott, the managing director for the Company, has consistently displayed a very unusual resourcefulness in the management of the industry which has been so inadequately described. Aside from a thorough theoretical training he had a number of years of practical experience, having served his apprenticeship in one of the largest engineering works in the country. The knowledge thus gained has been supplemented by wide travel and observation, during which he familiarized himself with the best methods of foreign engineers. He was recently elected President of the Gloucester Chamber of Commerce, a post in which his energy and judgment will no doubt prove of great service to the city.



LIGHT DRAUGHT STEAMER.
Constructed by Summers & Scott, Gloucester.

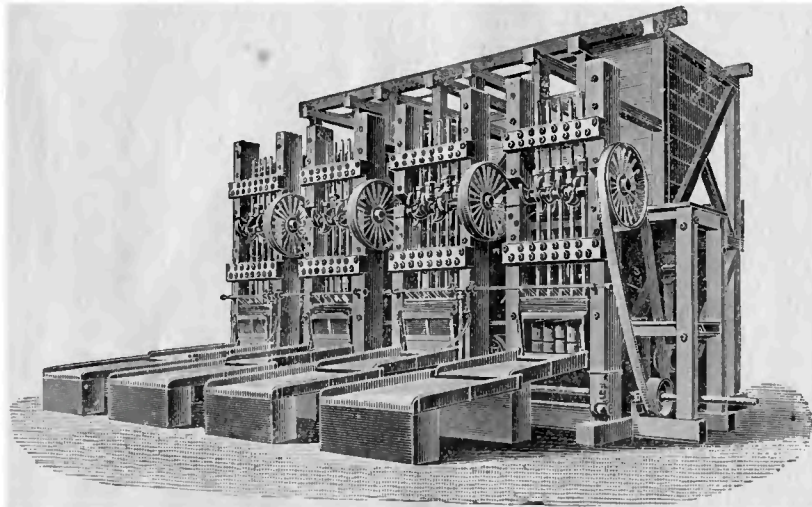
their building to India, Mexico, Chili, Brazil, and elsewhere. One of their boats, ordered from Brazil, reached the Bay of Rio just before a bombardment which took place during one of the frequent South American revolutions, though it escaped injury and is still in service in those waters.

In the manufacture of machinery for oil and cake mills and flour milling they have been scarcely less noted, having partly

or wholly equipped some of the largest mills in the country. For the more economical and rapid execution of this work they have invented several special machines, notably a very interesting machine for "fluting" chilled rollers for flour mills. The machines used for this purpose are particularly ingenious, eight tools making flutes on the rolls at the same time, and with a remarkable rapidity and precision.

As is the case with their other specialities to which we have referred, the Company design as well as manufacture machinery for oil, cake and flour mills, and estimates for the installation of a complete plant of any size or character will be furnished. In view of the high reputation they have so long enjoyed we need scarcely add that their estimates are based on the best attainable workmanship.

All of the specialities manufactured by the Company are fully described in exceptionally attractive illustrated catalogues, which, by the way, are printed by a Gloucester printer — John



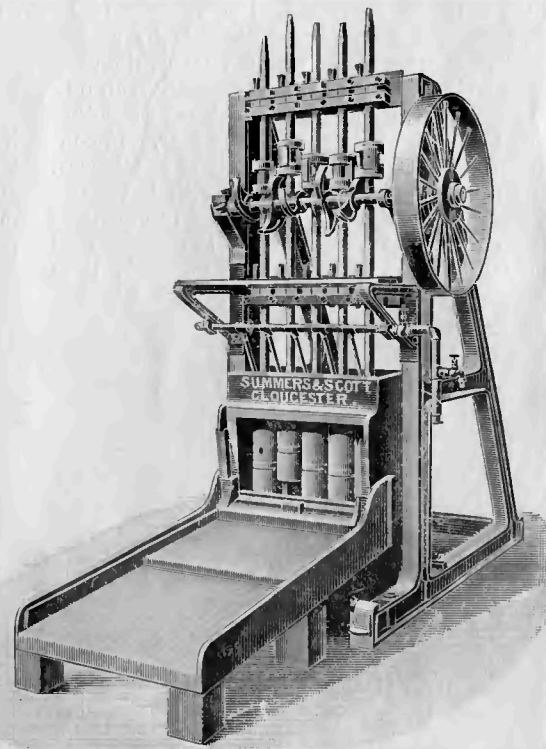
20-Head Battery with "High Bank" Frame constructed of timber.
Constructed by Summers & Scott, Gloucester.

been installed in several of the British Colonies, notably in South Africa and Australia, where they have withstood the severest tests of long use. In this work the Company successfully compete with the leading British and foreign engineers. The manufacture of mining machinery was begun in 1894, since when this class of work alone has formed in itself a very respectable industry.

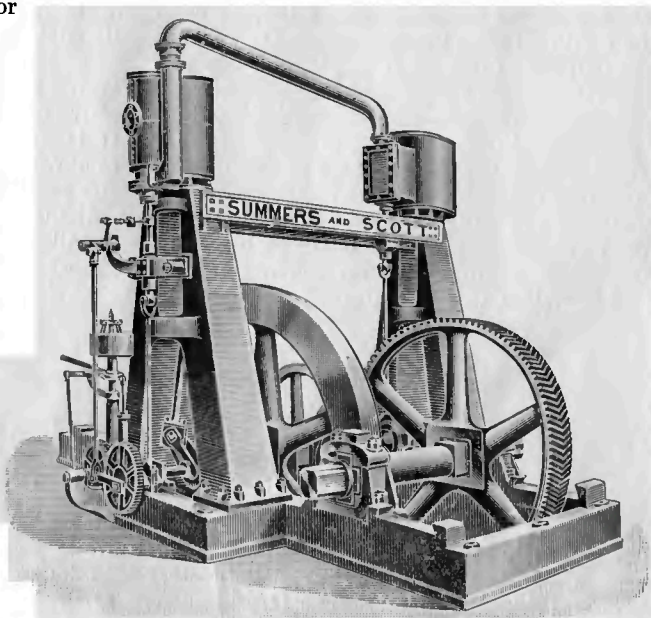
The stamp battery shown in the accompanying engraving was made for South Africa.

Still another important feature is the designing, construction and erection of water works engines and plants. In addition to the engines which supply this city with water, the Company have executed large contracts of this character for a number of English cities, and are at the time of writing completing a plant for one of the larger Midland cities. They have also designed and installed pumping plants in Mexico, their work in that country having gained the most flattering comment from the Government authorities. Mr. Scott has recently returned from a trip to Mexico, the United States, and Canada, in all of these places finding the reputation of the Company firmly established.

One of the accompanying illustrations represents the Company's three-crank INVERTED TRIPLE EXPANSION SURFACE CONDENSING ENGINES for driving pumps for water works and sewage plants, etc., which are fitted with specially



5-STAMP BATTERY WITH IRON "A" FRAME.
Constructed by Summers & Scott, Gloucester.



ROLLING MILL ENGINE.
Constructed by Summers & Scott, Gloucester.